Review Unit 6-Chapter 13.1,14, and 10.2 Chem 11- Mrs. Sanford Name:

Gas- period:

Give 3 characteristics of a gas- 1 2.

(using kinetic theory) 3.

Boyle’s Law-

101.3 Kpa = \_\_\_\_\_\_\_\_\_mm Hg = \_\_\_\_\_\_\_\_atm.

S.T.P. -(Give units)-

Charle’s Law-

Gay Lussac’s Law-

\_\_\_\_\_\_\_\_\_\_\_\_\_\_is proportional to the average kinetic energy of the particles of a substance.

Kelvin Temp. Scale-

Combined Gas Law-

Avogadros’s Hypothesis-

Molar volume-

Molar volume at STP-

compare Ideal gases and real gases

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| Ideal Gases | Real Gases |
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What is R?

Problems

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| 1. Convert 5.1L of CO gas at STP to moles.(ans )  2. Convert 20.7mL of fluorine gas at STP  to moles.(9.24 x 10-4 mol) | 3. Freon is a CFC used as a coolant in air conditioners and refrigerators. If 500mL of freon at 1.5atm and 24o C is compressed to 250mL at 3.50 atm, what is the final temperature of the gas?(74o C) |
| 4. What is the volume of 1.0 g of carbon dioxide trapped in bread dough at STP?  (Ans ) | 5. Find the molar mass of 6grams of a gas that occupies 27L at 150KPa and 30 o C. |
| 6. In a cylinder of a diesel engine, 500 mL of air at 40.0 oC and 101.3 KPa is compressed just before the diesel fuel is injected. The resulting pressure is 3.54 x 103KPa . If the final volume is 23.0 mL, What is the final temperature in the cylinder? | 7. Find an example from p 439 for  a) Boyle’s Law  b)Charle’s Law  c) Gay-Lussac’s Law  d)Dalton’s Law of Partial Pressure |

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| Dalton’s Law of partial pressures- |

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| Fill in the missing information:  In table: |

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| \_\_\_\_\_C8H18(g) + 25 O2(g)----> \_\_\_\_\_\_ CO2(g) + \_\_\_\_\_H2O(g) |
| 1 mol 12.5mol \_\_\_\_\_ \_\_\_\_\_\_ |
| 2 mol \_\_\_\_\_\_ 16 mol \_\_\_\_\_\_ |
| 1 L 12.5 L \_\_\_\_\_ \_\_\_\_\_\_ |
| 8 L \_\_\_\_\_ 64 mL \_\_\_\_\_\_ |
| \_\_\_\_L 5 L \_\_\_\_\_L \_\_\_\_\_\_ L |
| 250 mL \_\_\_\_\_mL \_\_\_\_\_mL \_\_\_\_\_\_mL |
| \_\_\_\_\_\_L \_\_\_\_\_\_10 L \_\_\_\_\_\_\_L \_\_\_\_\_\_\_L |